



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

*[Handwritten signature]*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/536,416

03/28/2000

Surya Kumar Kovvali

10939-002001

4937

26161

7590

02/20/2004

FISH & RICHARDSON PC  
225 FRANKLIN ST  
BOSTON, MA 02110

EXAMINER

MEHRA, INDER P

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 02/20/2004

*[Handwritten mark]*

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/536,416

Applicant(s)

KOVVALI ET AL.

Examiner

Inder P Mehra

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 and 41-48 is/are rejected.
- 7) ☒ Claim(s) 38-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. This is in response to application dated:3/28/00.

***Specifications***

2. The disclosure is objected to because of the following informalities:
  - a. Refer to page 5 line 15. "DTP" should be "DPT"

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 20, 33-35, 39, 43, and 46-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites the limitation " the communication session" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 33 recites the limitation "the accessed data" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 34 recites the limitation "communication session" in line 3. There is insufficient antecedent basis for this limitation in the claim

Art Unit: 2666

Claim 35 recites the limitation "the capacity" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 35 recite, "said request being sent from the second node and received at the third node". This limitation is confusing. In independent claim 18, lines 7-10, the limitation, "at a first node in the system, receiving a communication request for dynamically allocated channel between a second ----third node including receiving request data from the second node in the first part of a received frame. These contradict each other. In other words, the request is sent from second node to first node in claim 18, whereas in claim 35, which depends on claims 18, and 34 successively, the request is sent from second node to third node. It is, therefore, confusing. Specifications, page number and lines number, be disclosed.

Appropriate clarification/ clarification is required.

Claim 39 recites the limitations "the location" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 43 recites the following limitations: There is insufficient antecedent basis for this limitation in the claim.

- "the other nodes" in line 14;
- "the portion of a frame", in line 18.

Art Unit: 2666

Claim 46 recites the limitations "the allocated capacity" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 47 recites the limitations "the traffic streams " in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 48 recites the limitations "the allocated size for the traffic stream" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. Claims 18-19, 21-37, and 41-48 are rejected under 35 U.S.C. 102(e) as being anticipated by **Shaunfield** (US Patent No. 5,867,484).

For claims 18, 43 and 47, Shaunfield discloses, in reference to fig. 2, a method for communicating between a plurality of nodes of a communication system in which a series of fixed length frames ( SONET frame of 810 bytes, fig. 3, refer to col. 7 lines 49-50), pass between the nodes 1-7), of the system, refer to col. 5 lines 40-55 and col. 1 lines 10-20; further discloses arbiter, as recited by **claim 47**, refer to Master node 50 in fig. 2; comprising:

Art Unit: 2666

- provisioning the communication system, including allocating in each frame a fixed part-----for passing control information (control signals, refer to abstract, Network Management System Protocol (NMS) frame 80 in fig. 4a, refer to col. request for control, refer to col. 9 lines 50-55 ) between the nodes and a second part for passing data streams, (payload byte position, refer to col. 7 lines 55-65 ----dynamically allocated channels (dynamically assigned DS0 channels , refer to col. 8 lines 20-25) between the nodes, refer to col. 8 line 56 and lines 63-65, col. 8 lines 57-60;
- receiving a communication request for a dynamically allocated channel, (refer to DS0 channels dynamically assigned, refer to col. 8 lines 20-24) between a second node and thirds node-----the first part (bytes A sub 1, A sub 2 and C sub 1 and J sub 1 in fig. 3) of a received frame, refer to “request for control or data” col. 9 lines 50-55;
- allocating a portion of the second portion of the second part of the frames to said dynamically allocated channel, refer to col. 4 lines 25-27, payload bytes in second part col. 4 line 5 – col. 8 lines 37, col. 8 lines 20-24, and col. 10 lines 50-55, fig. 3 bytes 5-90 second part;
- broadcasting (transmission to various nodes, col. 7 lines 24-25) a response to the request (response to request col. 9 line 55 and Table 2 col. 13 line 55- col. 14 line 64) including transmitting a control data (command specifying a particular action col. 10 lines 50-55) in the first part of a frame);

*at the second node,*

Art Unit: 2666

- receiving the control data transmitted by the first node, (refer to NMS data retrieved from the SONET frame, col. 4 lines 35-38;
- determining the portion of the second part of each of the frames that is allocated to said dynamically allocated channel, (NMS frame including data fields which specify the VT channels are retrieved and decoded, col. 4 lines 35-40), col. 10 line 55 and col. 7 line 59 - col. 8 line 24;
- sending a data stream over said dynamically allocated channel to the third node---series of frames, refer to “retrieving data from specified SONET channels, add its data to specified SONET VT channels, col. 4 lines 50-55; computer data can be inserted or retrieved by way of selected bytes, col. 6 lines 41-45; payload bytes for carrying data in the SONET frame , col. 7 lines 32-34;
- establishing a plurality of communication channels for passing data between the nodes-----plurality of communication channels coupling a second node to a third node, **as recited by claim 43**, (refer to VT channels and different bandwidths, refer to col. 8 lines 38-60);
- a framer for receiving a series of communication frames ---along the communication path, as recited by **claim 47**, refer to col. 4 lines 53-55 and col. 4 lines 60-62;
- circuitry for identifying control information in each of the communication frames, as recited by **claim 47**, refer to decoding the frame in col. 4 line 32;
- circuitry for determining an allocated location, col. 4 line 56, col. 9 line 23, and a size of a portion of each communication frame, col. 9 lines 29-33—allocated to a selected

Art Unit: 2666

one of the traffic streams, col. 6 lines 41-44, col. 8 lines 5-15, fig. 3 using identifies control information, as recited by **claim 47**, (NMS frame in fig. 4a);

- circuitry for inserting data for the selected traffic stream into the communication frame at the determined location for selected stream, as recited by **claim 47**, refer to col. 4 line 36-38, col. 6 lines 41-44.

For claims 19, 21, 34-37, 45-46 and 48, Shaunfield discloses the following limitations:

- “receiving a request to change an allocated capacity of a communication channel, as recited by claims **19, 35, 45- 46**, refer to col. 15 lines 15-20;
- request to assign a communication session for passing a data stream between the second and third node, as recited by **claim 34**, refer to “transmitting video data in VT Channel ,col. 15 lines 7-10;
- request determining an update to the allocation of the second part of the frames for the communication channels, and broadcasting control information to other nodes encoding the update to the allocation, as recited by claims **21, 46 and 48**, refer to col. 8 lines 20-24 and col. 15 lines 15-20.
- the third node, modifying the request and forwarding the modified request to the first node, as recited by **claim 36**; modifying the request is performed according to communication capacity “-----, as recited by **claim 37**, refer to “subsequent requests transmitted to change channel” col. 15 lines 15-20



Art Unit: 2666

For claims 22-27 and 44, Shaunfield discloses the following limitations, in reference to fig. 3:

- synchronous communication network, a fixed length payload, fixed part---includes allocating a portion of fixed length payload, as recited by **claim 22**, refer to fig. 3 and col. 7 line 49-col. 8 line 60, allocated col. 8 lines 5-20;
- synchronous communication network includes SONET/SDH network, refer to abstract, col. 2 lines 10-15 and a synchronous payload envelop (SPE) includes a fixed length payload, as recited by claims **23-24 and 44**, refer to fig. 3 and fixed length payload (783 payload bytes), col. 7 lines 50-55 and fixed stuff byte in col. 7 lines 59-col. 8 line 60.
- wherein the portion of the fixed length payload or SPE includes a virtual tributary group, as recited by claims **25 and 27**, refer to columns 4-90 and 9 rows are SPE including virtual tributary (VT) channels in fig. 3, refer to col. 7 line 49-col. 8 line 60;
- wherein provisioning the communication system includes ---SPE (fig. 3 columns 5-90 and 9 rows)----SONET/SDH virtual tributaries (fig. 3, refer to col. 7 line 49-col. 8 line 60)----allocated virtual paths , as **recited by claim 26**, (VT channels allocated , refer to col. 8 lines 1-24;

For claim 28, Shaunfield discloses, the first part of each frame (bytes A1, A2, C1 and J1 in fig. 3, is passing control information – dynamically allocated (dynamically assigned col. 8 lines 21-23) ---the system, refer to col. 4 lines 25-27 and col. 10 lines 50-55.

For claims 29-33, Shaunfield discloses the following limitations:

- wherein the control data that is broadcast in the first part of each frame is for passing data specifying portions of each frame associated with each of a plurality of dynamically allocation channels, as recited by **claim 29**, refer to col. 7 lines 20-25, col. 9 line 55 and col. 7 lines 20-25;
- wherein data specifying portions of each frame includes offset data of said portions within the frame, as recited by **claim 30**, refer to “J1 byte and H1 byte can occur anywhere in payload portion of the frame”, refer to col. 8 lines 47-50;
- wherein data specifying portions of each frame includes sizes of the data of said portions within the frame, recited by **claim 31**, refer to NDB field 104 relates to “number of data bytes”, refer to col. 10 lines 43-44;
- “wherein sending the data stream -----includes accessing the data specifying the portion of the frame associated with said dynamic channel”, as recited by **claim 32**, refer to fig. 4a frame 80, NDB.
- “wherein sending the data stream-----includes accessing the data specifying the portion of the frame associated with said dynamic channel”, as recited by **claim 33**, refer to data 106 fig. 4a, access 119.

Art Unit: 2666

*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaunfield** (US Patent No. 5,867,484), as applied to claim 18 above, and further in view of **Ballintine et al** (US Patent No. 5,282,200), hereinafter, Ballintine.

For claim 20, Shaunfield discloses all the limitations of the subject matter, with the exception of the following limitation:

- “wherein receiving the request to assign the communication session includes receiving a priority for said communication session”;

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of . The capability of receiving a priority for said communication session can be implemented by combining the system as taught by Ballintine at the network node requesting a channel. The suggestion/motivation to do so would have been to ensure overhead functions do not interfere or delay traffic protection.

9. Claims 41- 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaunfield** (US Patent No. 5,867,484), as applied to claim 18 above, and further in view of **Dempsey** (US Patent No. 6,246,667).

For claims 41-42, Shaunfield discloses the following limitations:

Art Unit: 2666

- “wherein the first part of the frame and second part of the frames includes allocating an integral numbers of columns of an SPE”, **as recited by claim 41** and “wherein allocating a portion of the second part of the frames includes allocating an integral number of nine-byte columns of an SPE”, **as recited by claim 42**, refer to fig. 3, col. 7 lines 49-col. 8 line 37.

Shaunfield does not disclose expressly discloses, “integral number of nine-byte columns of an SPE”;

Dempsey discloses, “integral number of nine-byte columns of an SPE”, refer to col. 2 lines 30-35;

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of integral number of nine-byte columns of an SPE. The capability can be implemented by combining the system as taught by Dempsey at the network node requesting a channel. The suggestion/motivation to do so would have been to ensure overhead functions do not interfere or delay traffic protection.

### *Allowable Subject Matter*

10. Claims 38-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is an examiner’s statement of reasons for allowance:

The prior art does not teach or fairly suggest the limitations of the following claims:

As recited by claims 38,

Art Unit: 2666

“wherein the fixed part includes a third part that is allocated for fixed-rate channels between the nodes”;

As recited by claim 39,

“wherein the location of the third part in the fixed part remains constant independent of locations of dynamically allocated channels”;

As recited by claim 40,

“wherein the third part includes a plurality of separated portions within the fixed part”.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

***Prior Art***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Tomizawa et al (US Patent No. 6,202,082) discloses transmitting signals between nodes in a trunk transmission network.

Art Unit: 2666

*Conclusion*

13. Any enquiry concerning this communication should be directed to Inder Mehra whose telephone number is (703) 305-1985. The examiner can be normally reached on Monday through Friday from 8:30AM to 5:00 PM.

If attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Seema Rao , can be reached on (703) 308-5463. Any enquiry of a general nature of relating to the status of this application or processing should be directed to the group receptionist whose telephone number is (703) 305-4700.

14. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to (703) 872-9314.

Hand -delivered responses should be brought to Crystal Park II, 2121 Crystal drive,  
Arlington, VA, sixth floor (Receptionist).

  
Inder Mehra

February 17, 2004

  
**DANGTON**  
PRIMARY EXAMINER